IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

BIG WILL ENTERPRISES, INC. **Plaintiff,** **v.** **SAFE APPS LIMITED,** **Defendant.**	**Civil Action File No.: 2:24-cv-00418** **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Big Will Enterprises Inc. ("BWE" or "Plaintiff") in British Columbia, by and through their undersigned attorneys, files this original Complaint against Safe Apps Limited ("StaySafe" or "Defendant") and alleges, based on its own knowledge with respect to itself and its own actions and based on information and belief as to all other matters, as follows:

INTRODUCTION

1.

This is an action for patent infringement arising under the patent laws of the United States, Title 35, United States Code to enjoin infringement and obtain damages from Defendant's unauthorized manufacture, use, sale, offer to sell, and/or importation into the United States for the subsequent use or sale of products or methods that infringe one or more claims of United States Patents: 9,049,558 ("the '558 Patent") and 8,559,914 ("the '914 Patent"). Copies of the '558 Patent and the '914 Patent are attached as Exhibits 1-2.

2.

BWE is an innovative company in the field of sensor technology for determining human activities for health, safety and other uses. BWE's sensor-based technologies go beyond determining simple human locations and offer smartphone users (and other communication-based devices) a personal surveillance system based on their activities. The technologies monitor sensors such as the accelerometer, the gyroscope and others for uniquely identifying human activities; the motion activities can include, for example, but not limited to, standing/stationary, walking, running, driving, skiing, sleeping, snoring, hiking, skateboarding, sky diving, bicycling, unicycling, golfing, falling down, swimming, riding a ski lift, a motor vehicle, a motorcycle, an airplane, a train, or a water vessel, accelerating or decelerating in a motor vehicle, motorcycle, train, airplane, or water vessel, vibrating, propagating through a medium, rotating, riding in a wheelchair, and other human movements, where capturing data and/or providing feedback is desired. BWE has created proprietary technologies in this field of technology since at least 2007 for, among other benefits, the increased health, safety, and wellbeing of its users. BWE's patented technology was developed for use on a wide variety of devices, including smartphones, smartwatches, and other communication and sensor-based devices in use on many popular products in the market today. In addition to licensing, BWE has incorporated its patented technology in its own test platforms for determining human activities, motions within activities, accidents and falls, among others.

3.

A primary inventive concept is method by which a particular human movement can be identified, when the sensors, in this case, those in a mobile phone, have no fixed orientation with respect to the human. A smart phone may be in a user's pocket, purse or backpack, for example

and in no particular orientation. Prior to BWE's inventions, there was no effective answer for this problem. BWE's sensor monitoring, processing and communication technology is covered by the claims of the '558, and the '914 Patents asserted in this action, as well as other BWE patents.

JURISDICTION AND VENUE

4.

BWE is a British Columbia company, incorporated in Canada having its principal place of business at 4573 West 1st Avenue, Vancouver, British Columbia V6R 1H7, Canada.

5.

Upon information and belief, Defendant Safe Apps Limited is a Private Limited Company organized under the laws of the United Kingdom, having its headquarters at Newhouse Farm Business Centre, Langley Road, Edstone, Wootton Wawen, Henley-in-Arden, Warwickshire, B95 6DL United Kingdom. StaySafe may be served this Complaint by service in accordance with the Convention of 15 November 1965 on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters ("The Hague Service Convention"). Fed. R. Civ. P. 4(h)(2).

6.

This is an action for infringement of a United States patent arising under 35 U.S.C. §§ 271, 281, and 284-285, among others. This Court has subject matter jurisdiction over all causes of action set forth herein pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

7.

Upon information and belief, Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to Defendant's substantial business in this State and judicial district, including: (i) at least a portion

of the infringements alleged herein; and/or (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this district.

8.

On information and belief, Defendant's products and services are offered for sale and sold to customers residing in this State and District. Defendants also provide an online presence under the name staysafeapp.com which is available to customers and prospective customers within this State and District. As a result of Defendant's business activities in this State and District, on information and belief, Defendants have had continuous and systematic contacts with this State and District, including sales to customers residing in this State and District.

9.

Venue is proper in this judicial district and division pursuant to 28 U.S.C. §1391(c)(3) in that Defendant is not resident in the United States. Venue is appropriate in this judicial district and division pursuant to 28 U.S.C. §1400(b) in that, upon information and belief, Defendant routinely does business within this district, has committed acts of infringement within this district, and continues to commit acts of infringement within this district.

ALLEGATIONS COMMON TO ALL COUNTS

10.

Plaintiff ("BWE") owns all right, title, interest in, and has standing to sue for infringement the following patents: United States Patent No. 9,049,558, entitled "Systems and methods for determining mobile thing motion activity (MTMA) using sensor data of wireless communication device (WCD) and initiating activity-based actions," issued on June 02, 2015, and United States Patent No. 8,559,914 entitled "Interactive personal surveillance and security (IPSS) systems and methods," issued on October 15, 2013

BWE is a global leader and innovator in the field of sensor technology for determining human activities for health, safety and other uses. These proprietary technologies and innovations were being developed since 2007 for the increased health, safety and wellbeing of its users. BWE patented technology was developed for use on a wide variety of devices, including smartphones and wearables and are in use on many popular products in the market today. In addition to licensing, BWE has incorporated its patented technology in its own test platforms for determining human activities, motions within activities, accidents and falls, among others.

11.

BWE's sensor based technologies go beyond determining human locations by uniquely identifying human activities for automatically monitoring and tracking movements, such as sleep, stationary, walking, running, cycling, falling down, rotating and other human movements where capturing data and/or providing feedback is desired.

12.

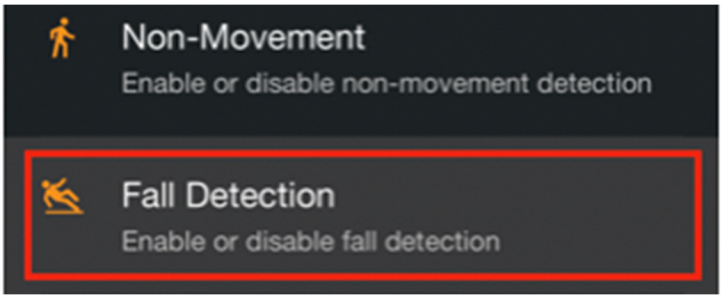
BWE's sensor monitoring, processing and communication technologies are covered by the claims of the '558 Patent, and the '914 Patent, which are asserted in this action, as well as other BWE patents.

13.

Defendant is a technology company in the business of designing, manufacturing, and supplying on a world-wide basis lone worker safety solutions. In particular, Defendant designed, manufactured, and is using and selling a family of telematics solutions—the lone worker application and the lone worker hub (collectively, the StaySafe application).

14.

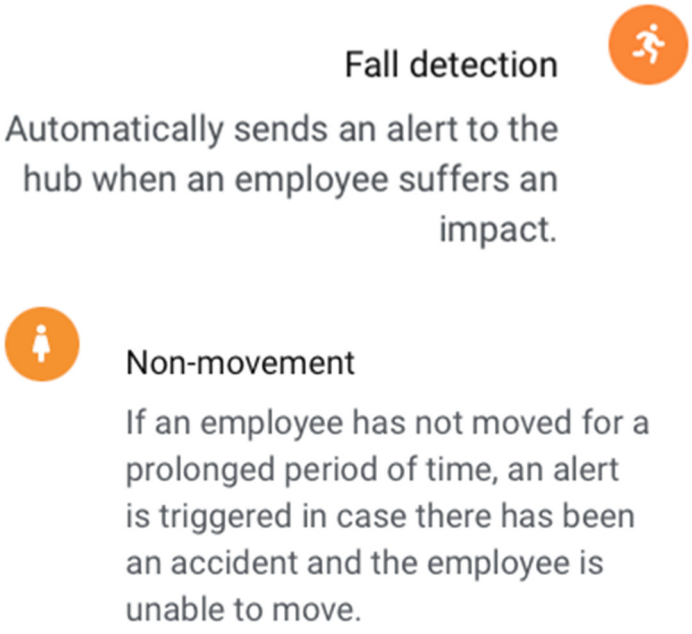
The StaySafe application uses wireless communication devices (WCDs), to enhance the worker safety, reduce accidents, and decrease insurance claims. These devices, equipped with memory, processors, and co-processors, play a crucial role in giving employers visibility of the location and safety status of lone workers in an emergency and allowing them to check-in safely once they have finished a lone working or travel session. By monitoring and analyzing accelerometer and gyroscope data, user falls be determined and reported. In particular, the StaySafe application uses smartphones (wireless communication devices) for determining human activities, including when users fall by acceleration and or impact, normal movement and non-movement that may represent a user need for help or assistance. Determination of the human activities occurs by monitoring the accelerometer sensor data over time periods.



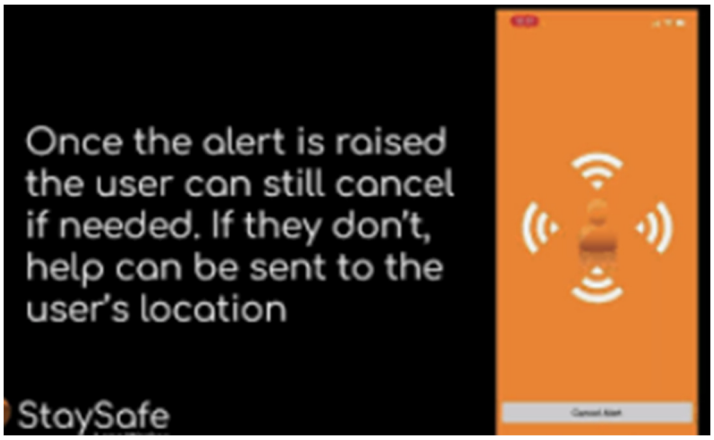
> You can then use the slide on the screen to adjust the sensitivity of the fall detection. Your options are Moderate, High and Fall From Height. You can select Moderate to detect lower impact events such as falling from a height of around 50-100cm. We recommend the Fall From Height setting if you regularly work at height, such as on ladders or scaffolding. The High impact setting offers the best general configuration. [https://docs.staysafeapp.com/en/articles/5954446-how-to-set-up-fall-detection-in-the-staysafe-app.]
>
> You can then use the slide on screen to adjust how long a period of non-movement you wish before sending the alert. Your options are 5 minutes, 10 minutes and 15 minutes. Halfway through this period, if your phone does not move, you will be notified, and again one minute before an alert. You can reset the period at any time, by shaking your phone, which will register as movement. [*Id.*]

15.

On information and belief, the StaySafe application uses logic for determining a surveillance mode that corresponds to a user activity: Fall detection works by detecting an accelerated movement, impact or both; non-movement works by detecting only very-small movements from the accelerometer and not considering (i.e., removing or ignoring) gravity accelerations over seconds; and normal activities are considered between fall detection high level accelerations and very low level accelerations minus gravity. The application uses code that computes reference data and live accelerometer data for determining different surveillance modes for (a. falling and or impacts, (b) non-movement, and (c) and normal activities.



https://staysafeapp.com/en-us/lone-worker-solution/lone-worker-app/. The StaySafe application facilitates a user response when a fall activity or non-movement activity is detected. The application starts an onscreen countdown and audible sounds for predetermined (settings) time periods before activating alarms to third parties. After third parties are notified, the user may cancel the alert.



COUNT I

DIRECT INFRINGEMENT OF THE '558 PATENT

16.

Plaintiff incorporates by reference the allegations of Paragraphs 1-15.

17.

Defendant has directly infringed and continues to directly infringe at least one or more claims of the '558 Patent, through, among other activities, making, using, and incorporating into Defendant's StaySafe system automatic programs for monitoring human activities while working. On information and belief, Defendant's StaySafe system is provided, at least in part, as a smartphone-deployed worker activity monitoring and reporting solution.

18.

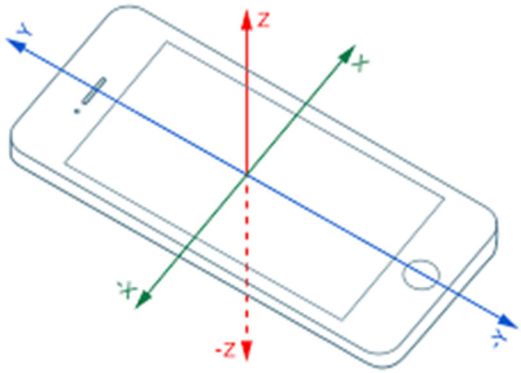
Independent Claim 1 of the '558 Patent, shown in italics, recites:

> *1. A method, comprising: receiving a time value and at least three streams of data sample values from one or more sensors of a wireless communication device (WCD) that is transported by a mobile thing (MT), each data sample value indicative of movement of the WCD at a corresponding time value;*

The StaySafe application uses wireless communication devices for determining human activities including falling, non-movement, and normal movement, by monitoring linear acceleration and

angular velocity sensor data over time periods from the internal accelerometer sensor and/or gyroscope sensor. In particular, the StaySafe application uses native applications running on top of the operating systems of smartphones that are equipped with an accelerometer and gyroscope sensors for monitoring three streams of data ("the *x*, *y*, and *z* axis") from each device. The StaySafe application monitors the accelerometer sensor for linear acceleration and the gyroscope sensor for angular velocity to determine human activities from sensor data. Accelerometers are sensors which measure acceleration, the change in velocity over time (SI unit: m/s^2). The StaySafe application code measures acceleration of the user and driver in time-segments, using first, second, et cetera, to confirm multiple time-segment matches to confirm most human activities.

recognizing a particular set of data sample values as a reference for defining an orientation of the WCD in a coordinate system;



The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to measure linear acceleration and/or the gyroscope *x*, *y*, and *z* axis data to measure angular velocity to sense and determine the orientation so that falling may be accurately measured. Defining the orientation determines a reference and orientation allow and/or to increase the accuracy of identifying a Motion Activity (MT). Defining the ongoing stream of data representing forward momentum and/or gravity the data is measured and used for determining orientation in the coordinate system. In other words, the StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis to

detect the linear acceleration of gravity for determining the orientation of the three dimensional (3D) coordinate system (accelerometer) so it may accurately measure human activities.

> *computing reference data based upon the recognition of the particular set, the reference data defining a relationship between each set of subsequent non-reference data sample values and the particular reference set of data sample values in the coordinate system;*

Defendant's StaySafe application computes reference data and particular sets of non-reference data. Each segment of reference data represents acceleration in an *x*, *y* or *z* axis over a period of time. In particular, the StaySafe application computes reference data with data sets coming from knowing at least one orientation identified through the acceleration that comes from earth's gravity and the other accelerations that are determined by the user's activity are measured by the accelerometers *x*, *y* or *z* axis.

> *calculating movement data in the coordinate system of one or more other non-reference data sample values based upon the reference data; and*

The StaySafe application computes movement data including acceleration in *x*, *y* and *z* axes over a periods of time. The StaySafe application computes reference data and multiple data sets coming from accelerations that are measured by the accelerometers *x*, *y* and *z* axes over periods of time.

> *determining a mobile thing motion activity (MTMA) associated with the MT based upon the movement data.*

By comparing the StaySafe application reference data with the accelerometer data, and optionally GPS data, falling, non-movement, and normal movement states are determined from the movement data.

19.

Claim 2 of the '558 Patent, for example, recites:

> *2. The method of claim 1, further comprising: prior to recognizing, mathematically combining the data sample values of the particular reference set; and recognizing the particular reference set as the reference*

> *when a combined value has a magnitude that is indicative of a relationship to Earth gravity.*

Defendant's StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to determine and recognize the direction of Earth's gravity. Because smartphone movements are dynamic, *i.e.*, the phone's orientation is not static and therefore an unknown variable, the StaySafe application monitors the direction of the Earth's gravity to establish the current orientation of the device by totaling the three accelerometer axis (x, *y* and *z*) data over short time periods that is equal to the Earth's gravity (9.807 m/s^2).

20.

Claim 3 of the '558 Patent, for example, recites:

> *3. The method of claim 2, further comprising updating the reference data each time the reference set of data samples is recognized.*

On information and belief, the StaySafe application uses short time periods between 1 and 200ths of a second to recalculate the direction of the Earth's gravity ("9.807"). This provides an updated orientation of the smartphone device (multiple times per second).

21.

Claim 4 of the '558 Patent, for example, recites:

> *4. The method of claim 1, wherein: each set of data sample values includes a vector defined by three data sample values x, y, z; the reference data is a rotation matrix M; and the movement data comprises a vertical magnitude along the z axis and a horizontal magnitude along the x, y plane, both derived from a rotated vector, the rotated vector equal to the rotation matrix M multiplied by the vector associated with the other non-reference data sample values x, y, z.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to determine and recognize the direction of Earth's gravity. After the direction of the Earth's gravity (9.807 m/s^2) is determined, for example, the StaySafe application first determines the vertical direction,

then a second horizontal direction is determined by rotating the vector for measuring for determining falling, non-movement, and normal movement states.

22.

Claim 5 of the '558 Patent, for example, recites:

> *5. The method of claim 4, further comprising: transforming the movement data to the frequency domain (FD) to produce FD data; computing one or more FD statistical metrics from the FD data; and wherein the MTMA identifying is based at least in part upon the FD statistical metrics.*

On information and belief, the StaySafe application processes the smartphone's accelerometer *x*, *y* and *z* axis data in a frequency domain (FD) to determine at least part of the motion activity. The StaySafe application uses Fast Fourier Transform (FFT) to convert the users smartphone accelerometer data to frequency domain from time domain. The frequency domain provides enhanced measurements of *x*, *y* and *z* axis data, including the band power of the signal, the energy (summation of the squared FFT parameters - coefficients), and the magnitude. The StaySafe application determines the motion activity, at least in part by the mean, maximum and minimum values of accelerometer's *x*, *y* and *z* axis that come from the smartphone's movements.

23.

Claim 6 of the '558 Patent, for example, recites:

> *6. The method of claim 5, wherein the MTMA is identified from a set of MTMAs and further comprising: computing a score for each MTMA of the set; and comparing the scores to identify the MTMA.*

On information and belief, the StaySafe application uses a list of motion activities such as falling, non-movement, and normal movement.

24.

Claim 7 of the '558 Patent, for example, recites:

> *7. The system of claim 5, wherein the MTMA is identified from a set of MTMAs and wherein the computer program code further comprises: code*

> *to compute a score for each MTMA of the set; and code to compare the scores to identify the MTMA.*

On information and belief, the StaySafe application uses a list of motion activities such as falling, non-movement, and normal movement. Each data set provides an acceleration level (*i.e.,* score) and will be used in determining when an emergency event occurs for the user.

25.

Claim 8 of the '558 Patent, for example, recites:

> *8. The method of claim 1, wherein the MTMA is identified from a set of MTMAs and further comprising: computing a score for each MTMA of the set; and comparing the scores to identify the MTMA*

On information and belief, the StaySafe application uses a list of motion activities such as falling, non-movement, and normal movement. Each data set provides an acceleration level (*i.e.,* score) and will be used in determining when an emergency event occurs for the user.

26.

Claim 9 of the '558 Patent, for example, recites:

> *9. The method of claim 1, wherein the reference data is in the form of a rotation matrix that normalizes the sets of non-reference data sample values with respect to Earth gravity.*

On information and belief, the StaySafe application determines motion activities such as falling, non-movement, and normal movement by determining and measuring a horizontal motion through a rotation matrix to Earth's gravity.

27.

Claim 10 of the '558 Patent, for example, recites:

> *10. The method of claim 1, wherein the movement data is in the time domain (TD) and wherein the computing comprises: computing a magnitude of the movement data in each of the two dimensions of space; computing one or more TD statistical metrics from the magnitudes; and wherein the MTMA determining is based at least in part upon the TD statistical metrics.*

The StaySafe application measures acceleration by magnitude and time to determine motion activities such as falling, non-movement, and normal movement.

28.

Claim 11 of the '558 Patent, for example, recites:

> *11. The method of claim 10, further comprising: transforming the magnitudes from the TD to the frequency domain (FD) to produce FD data; computing one or more FD statistical metrics from the FD data; and wherein the MTMA determining is based at least in part the FD statistical metrics.*

On information and belief, the StaySafe application processes the smartphone's accelerometer *x*, *y* and *z* axis data in a frequency domain (FD) to determine at least part of the motion activity. The StaySafe application uses Fast Fourier Transform to convert the users smartphone accelerometer data to frequency domain from time domain. The frequency domain provides enhanced measurements of *x*, *y* and *z* axis data, including the band power of the signal, the energy (summation of the squared FFT parameters - coefficients), and the magnitude. The StaySafe application determines the motion activity, at least in part by the mean, maximum and minimum values of accelerometer's *x*, *y* and *z* axis that come from the smartphone's movements.

29.

Claim 12 of the '558 Patent, for example, recites:

> *12. The system of claim 10, wherein the computer program code further comprises: code to transform the magnitudes from the TD to the frequency domain (FD) to produce FD data; code to compute one or more FD statistical metrics from the FD data; and wherein the MTMA determining is based at least in part the FD statistical metrics.*

On information and belief, the StaySafe application measures acceleration by magnitude and time to determine motion activities such as falling, non-movement, and normal movement. The frequency domain (FD) may be updated by analysis over time and used to determine the motion activity.

30.

Claim 13 of the ’558 Patent, for example, recites:

> *13. The method of claim 1, wherein one or more of the steps of the method is implemented in the WCD, in a computer system that is remote to the WCD, or in a combination of both.*

On information and belief, the StaySafe system may use servers and other remote computers to implement one or more of the steps to measure, determine and/or rate the acceleration to determine motion activities.

31.

Claim 14 of the ’558 Patent, for example, recites:

> *14. The system of claim 1, wherein the MTMA is identified from a set of MTMAs and wherein the computer program code further comprises: code to compute a score for each MTMA of the set; and code to compare the scores to identify the MTMA.*

On information and belief, the StaySafe application identifies a motion activity by computing a score related to an activity match, and when close, the activity is determined.

32.

Claim 15 of the ’558 Patent, for example, recites:

> *15. The system of claim 1, wherein the reference data is in the form of a rotation matrix that normalizes the sets of non-reference data sample values with respect to Earth gravity.*

The StaySafe application determines motion activities such as falling, non-movement, and normal movement by determining and measuring a horizontal motion through normalizing the data in a directional analysis to Earth’s gravity.

33.

Claim 16 of the ’558 Patent, for example, recites:

> *16. The system of claim 1, wherein the system is implemented in the WCD, in a computer system that is remote to the WCD, or in a combination of both.*

On information and belief, Defendant's StaySafe system may use servers and other remote computers to implement one or more of the steps to measure, determine and/or rate the acceleration to determine motion activities.

34.

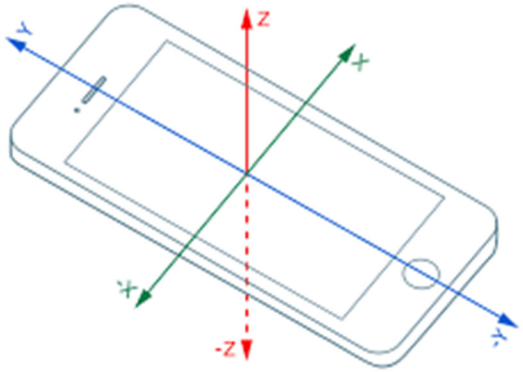
Independent Claim 17 of the '558 Patent, shown in italics, recites:

> *17. A method, comprising: receiving first and second data from one or more sensors associated with a wireless communication device (WCD) transported by a mobile thing (MT), the first and second data indicative of movement of the WCD;*

Defendant's StaySafe application uses wireless communication devices for determining human activities including falling, non-movement, and normal movement by monitoring linear acceleration and angular velocity sensor data over time periods from the internal accelerometer sensor and/or gyroscope sensor. In particular, the StaySafe application programs use smartphones equipped with an accelerometer and gyroscope sensors for monitoring three streams of data ("the *x*, *y*, and *z* axis") from each device. The StaySafe application software monitors the accelerometer sensor for linear acceleration and the gyroscope sensor for angular velocity to determine human activities. Accelerometers are sensors which measure acceleration, the change in velocity of an object over time (SI unit: m/s^2). The StaySafe application measures acceleration of the user in time-segments, using first, second, et cetera, to confirm multiple time-segment matches to confirm most human activities.

Claim 17 continues:

> *determining reference data that defines a reference framework from the first data;*



The StaySafe application uses reference accelerometer data for the *x*, *y*, and *z* axes that have been averaged and normalized.

> *normalizing the second data with the reference data so that the second data can be analyzed in the reference framework; and*

The accelerometer data is normalized by time, by adjusting values or series of data, and/or by combining axis data for processing with reference data. Peak frequencies, time between peaks, rounding, and other processes may be used.

> *identifying a mobile thing motion activity (MTMA) associated with the MT based upon the normalized second data.*

By comparing the StaySafe application reference data with the accelerometer data, motion activities such as falling, non-movement, and normal movement may be determined from the movement data.

35.

Claim 18 of the '558 Patent, for example, recites:

> *18. The method of claim 17, wherein the second data comprises a plurality of periodic samples.*

On information and belief, Defendant's StaySafe application uses different periodic sample rates based on the activity.

36.

Claim 19 of the '558 Patent, for example, recites:

> *19. The method of claim 17, wherein the reference data is indicative of a relationship to Earth gravity.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to determine and recognize the direction of Earth's gravity. Smartphone movements are dynamic, therefore the StaySafe application monitors the direction of the Earth's gravity to establish an orientation of the device by totaling the accelerometer axis data over short time periods that is equal to the Earth's gravity (9.807 m/s^2).

37.

Claim 20 of the '558 Patent, for example, recites:

> *20. The method of claim 17, wherein the reference data is determined in the form of vector information indicative of a relation to Earth gravity by comparing the first data to a predefined numerical range.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to determine and recognize the direction of Earth's gravity. Because smartphone movements are dynamic and the phone's orientation is not a given variable, the StaySafe application monitors the direction of the Earth's gravity to establish an orientation of the device by totaling the accelerometer axis data over short time periods that is equal to the Earth's gravity (9.807 m/s^2).

38.

Claim 21 of the '558 Patent, for example, recites:

> *21. The method of claim 20, wherein the one or more sensors produce first, second, and third sample data along each of 3 axes in a three dimensional (3D) coordinate system and wherein the first data pertains to a value that equals one within a predefined range, the value computed by combining the first, second, and third sample data.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to measure linear acceleration and/or the gyroscope *x*, *y*, and *z* axis data to measure angular velocity to sense data over multiple samples to accurately identify the motion activity.

39.

Claim 22 of the '558 Patent, for example, recites:

> *22. The method of claim 17, wherein the second data is in the time domain (TD) and wherein the identifying comprises: computing magnitudes of the second data in each of the two dimensions of the 2D space; computing one or more TD statistical metrics from the magnitudes; and wherein the MTMA identifying is based at least in part upon the TD statistical metrics.*

On information and belief, the StaySafe application identifies a motion activity by monitoring and computing the magnitudes of the data in a two dimension time domain. The StaySafe application uses Fast Fourier Transform to convert the users smartphone accelerometer data to frequency domain from time domain. The frequency domain provides enhanced measurements of *x*, *y* and *z* axis data, including the band power of the signal, the energy (summation of the squared FFT parameters - coefficients), and the magnitude. The StaySafe application determines the motion activity, at least in part by the mean, maximum and minimum values of accelerometer's *x*, *y* and *z* axis that come from the smartphone's movements.

40.

Claim 23 of the '558 Patent, for example, recites:

> *23. The method of claim 22, further comprising: transforming the magnitudes from the TD to the frequency domain (FD) to produce FD data; computing one or more FD statistical metrics from the FD data; and wherein the MTMA identifying is based at least in part the FD statistical metrics.*

On information and belief, Defendant's StaySafe application measures acceleration by magnitude and time to determine motion activities such as falling, non-movement, and normal movement. The frequency domain (FD) may be updated by analysis from the time domain (TD) and used to

determine the motion activity. On information and belief, the StaySafe application uses statistical metrics that is collected over time, to update motion activity data for matching.

41.

Claim 24 of the '558 Patent, for example, recites:

> *24. The method of claim 23, wherein the MTMA is identified from a known plurality of MTMAs and further comprising: computing a score for each MTMA of the known plurality; and comparing the scores to identify the MTMA.*

On information and belief, Defendant's StaySafe application identifies a motion activity by computing a score related to an activity match, and when close, the activity is determined.

42.

Claim 25 of the '558 Patent, for example, recites:

> *25. The method of claim 17, wherein one or more of the steps of the method is implemented in the WCD, in a computer system that is remote to the WCD, or in a combination of both.*

On information and belief, Defendant's StaySafe application may use servers and other remote computers to implement one or more of the steps to measure, determine and/or rate the acceleration to determine motion activities.

43.

Claim 26 of the '558 Patent, for example, recites:

> *26. The method of claim 17, further comprising: determining an MTMA based action to be initiated based upon the identified MTMA; and initiating the MTMA based action.*

On information and belief, the StaySafe application determines when a user has fallen, and when there is subsequent non-movement for a predetermined period of time, a third party responder is notified.

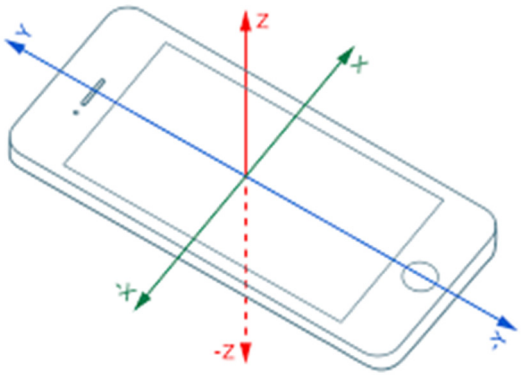
44.

Independent Claim 27 of the ’558 Patent, shown in italics, recites:

> *27. A method for implementation in a wireless communication device (WCD) that is designed to detect a plurality of mobile thing motion activities (MTMAs) associated with a mobile thing (MT), comprising:*

Defendant’s StaySafe system uses wireless communication devices for determining human activities including falling, non-movement, and normal movement by monitoring linear acceleration and angular velocity sensor data over time periods from the internal accelerometer sensor and/or gyroscope sensor.

> *receiving a plurality of data sample values from one or more sensors of the WCD that is transported by the MT, the data sample values indicative of movement of the WCD;*



The StaySafe application collects and processes accelerometer sensor data when users are in possession of their wireless communication device.

> *computing reference data, the reference data defining a relationship between data sample values and a reference framework to enable comparison of data sample values; calculating movement data based upon the reference data and the data sample values; and*

The StaySafe application computes reference data within a framework (values, size, time, peaks, frequencies, filtering out dominant frequencies, et cetera) with accelerometer data samples that come from wireless communication device.

> *determining an MTMA associated with the MT based upon the movement data.*

By comparing the StaySafe application reference data with the accelerometer data, a motion activity may be determined from the movement data.

45.

Claim 28 of the '558 Patent, for example, recites:

> *28. The method of claim 27, further comprising: recognizing a particular set of data sample values as a reference for defining an orientation of the WCD in a coordinate system; determining a rotation matrix based upon the particular set of reference data sample values; and calculating the movement data based upon the rotation matrix and one or more sets of the data sample values that are not the particular reference set.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to determine and recognize the direction of Earth's gravity. After the direction of the Earth's gravity is determined, for example, the StaySafe application first determines the vertical direction, then a second horizontal direction is determined by rotating the vector for measuring forward/backwards and fast cornering types of vehicle movements through acceleration on a horizontal plane.

46.

Claim 29 of the '558 Patent, for example, recites:

> *29. The method of claim 27, wherein the data sample values are received from a plurality of the sensors.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis and the gyroscope *x*, *y*, and *z* axis, magnatometer, touch screen, and/or GPS data samples for determining at least part of the motion activities.

47.

Claim 30 of the '558 Patent, for example, recites:

> *30. The method of claim 29, wherein the plurality of sensors includes at least an accelerometer and a gyroscope.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axes and/or the gyroscope *x*, *y*, and *z* axes for determining at least part of the motion activities.

48.

Claim 31 of the '558 Patent, for example, recites:

> *31. The method of claim 30, wherein the plurality of sensors further includes a global positioning system (GPS) receiver.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axes, the gyroscope *x*, *y*, and *z* axes and/or the global positioning system (GPS) receiver for determining at least part of the motion activities.

49.

Claim 32 of the '558 Patent, for example, recites:

> *32. The method of claim 27, wherein the MTMA is determined by: computing a score for each MTMA of the plurality; and comparing the scores to identify the MTMA.*

On information and belief, Defendant's StaySafe application uses a score that matches different motion activities. The score includes at least the frequency domain and/or the time domain for multiple data samples.

50.

Claim 33 of the '558 Patent, for example, recites:

> *33. The method of claim 27, wherein the reference data is indicative of a relationship to Earth gravity.*

The StaySafe application uses reference data to match sensor data that corresponds to Earth's gravity.

51.

Claim 34 of the '558 Patent, for example, recites:

> *34. The method of claim 27, wherein the movement data is in the time domain (TD) and wherein the calculating comprises: computing a magnitude of the movement data in each of at least two dimensions of space; computing one or more TD statistical metrics from the magnitudes; and wherein the MTMA determining is based at least in part upon the TD statistical metrics.*

On information and belief, the StaySafe application processes the smartphone's accelerometer *x*, *y* and *z* axis data in a frequency domain (FD) to determine at least part of the motion activity. The StaySafe application uses the frequency domain to determine the maximum and minimum values of accelerometer's *x*, *y* and *z* axis in a two dimensional space so a time domain may enhance types of motion activities from the smartphone's movements.

52.

Claim 35 of the '558 Patent, for example, recites:

> *35. The method of claim 34, further comprising: transforming the magnitudes from the TD to the frequency domain (FD) to produce FD data; computing one or more FD statistical metrics from the FD data; and wherein the MTMA determining is based at least in part the FD statistical metrics.*

On information and belief, the StaySafe application further transforms the magnitudes from the time domain to the frequency domain to form frequency domain data. Statistical metrics at least in part determine the motion activity. The StaySafe application uses Fast Fourier Transform to convert the users smartphone accelerometer data to frequency domain from time domain. The frequency domain provides enhanced measurements of *x*, *y* and *z* axis data, including the band power of the signal, the energy (summation of the squared FFT parameters - coefficients), and the magnitude. The StaySafe application determines the motion activity, at least in part by the mean, maximum and minimum values of accelerometer's *x*, *y* and *z* axis that come from the smartphone's movements.

53.

Independent Claim 36 of the '558 Patent, shown in italics, recites:

> *36. A system, comprising: one or more memories designed to store computer program code; one or more processors designed to execute the computer program code; and wherein the computer program code comprises:*

Defendant's StaySafe system uses native applications running on top of the operating systems of smartphones that use memories, processors.

> *code to receive a time value and at least three streams of data sample values from one or more sensors of a wireless communication device (WCD) that is transported by a mobile thing (MT), each data sample value indicative of movement of the WCD at a corresponding time value;*

On information and belief, the StaySafe application native applications monitor the accelerometer and gyroscope sensors for monitoring three streams of data ("the *x*, *y*, and *z* axis") from each device. The StaySafe application software monitors the accelerometer sensor for linear acceleration and the gyroscope sensor for angular velocity to determine human activities (from sensor data), such as falling, non-movement, and normal movement. Accelerometers are sensors which measure acceleration, the change in velocity over time. The StaySafe application programs measure acceleration of the user and driver in time-segments, using first, second, et cetera, to confirm multiple time-segment matches to confirm most human activities.

Claim 36 continues:

> *code to recognize a particular set of data sample values as a reference for defining an orientation of the WCD in a coordinate system;*

Because smartphone movements are dynamic and therefore a phone's orientation is not a given, the StaySafe application monitors the direction of the Earth's gravity to establish an orientation of the device by totaling the accelerometer axis data over short time periods that is equal to the Earth's gravity (9.807 m/s^2).

> *code to compute reference data based upon the recognition of the particular set, the reference data defining a relationship between each set of subsequent non-reference data sample values and the particular reference set of data sample values in the coordinate system; code to calculate movement data in the coordinate system of one or more other non-reference data sample values based upon the reference data;*

On information and belief, the StaySafe application computes reference data within a framework (values, size, time, peaks, frequencies, filtering out dominant frequencies, etc.) with accelerometer data samples that come from wireless communication device.

> *and code to determine a mobile thing motion activity (MTMA) associated with the MT based upon the movement data.*

The StaySafe application includes code that determines falling, non-movement, and normal movement states.

54.

Claim 37 of the '558 Patent, for example, recites:

> *37. The system of claim 36, wherein the computer program code further comprises: code to mathematically combine the data sample values of the particular reference set; and code to recognize the particular reference set as the reference when a combined value has a magnitude that is indicative of a relationship to Earth gravity.*

The StaySafe application uses the smartphone's accelerometer *x*, *y* and *z* axis data to determine and recognize the direction of Earth's gravity. Smartphone movements are dynamic; therefore the StaySafe application monitors the direction of the Earth's gravity to establish an orientation of the device by totaling the accelerometer axis data over short time periods that is equal to the Earth's gravity.

55.

Claim 38 of the '558 Patent, for example, recites:

> *38. The system of claim 37, wherein the computer program code further comprises code to update the reference data each time the reference set of data samples is recognized.*

The StaySafe application automatically updates the orientation and the *x*, *y* and *z* axis data as the smartphone changes is rotational degrees, so the vertical and/or horizontal measurements may be made.

56.

Claim 39 of the '558 Patent, for example, recites:

> *39. The system of claim 36, wherein: each set of data sample values includes a vector defined by three data sample values x, y, z; the reference data is a rotation matrix M; and the movement data comprises a vertical magnitude along the z axis and a horizontal magnitude along the x, y plane, both derived from a rotated vector, the rotated vector equal to the rotation matrix M multiplied by the vector associated with the other non-reference data sample values x, y, z.*

On information and belief, the StaySafe application recalculates accelerometer axis data by adding, subtracting and/or combining accelerometer axis data based on a vertical magnitude and horizontal magnitude so the *x*, *y* and *z* axis data. Compared to horizontal and vertical smartphone movements, motion activities may be accurately determined and measured.

57.

Claim 40 of the '558 Patent, for example, recites:

> *40. The system of claim 39, wherein the computer program code further comprises: code to transform the movement data to the frequency domain (FD) to produce FD data; code to compute one or more FD statistical metrics from the FD data; and wherein the MTMA identifying is based at least in part upon the FD statistical metrics.*

On information and belief, the StaySafe application processes the smartphone's accelerometer *x*, *y* and *z* axis data in a frequency domain (FD) to determine at least part of the motion activity. The StaySafe application uses the frequency domain to determine the maximum and minimum values of accelerometer's *x*, *y* and *z* axis in a two dimensional space so a time domain may enhance types of motion activities from the smartphone's movements.

58.

Claim 41 of the '558 Patent, for example, recites:

> *41. The system of claim 36, wherein the movement data is in the time domain (TD) and wherein the code to compute comprises: code to compute a magnitude of the movement data in each of the two dimensions of space; code to compute one or more TD statistical metrics from the magnitudes; and wherein the MTMA determining is based at least in part upon the TD statistical metrics.*

On information and belief, the StaySafe application uses a discrete wavelet transform to convert data to time-frequency domain from time domain. This provides a two dimensional representation of the power/magnitude of the signal and detailed coefficients through a statistical metrics so part of the motion activity may be determined.

59.

Independent Claim 42 of the '558 Patent, shown in italics, recites:

> *42. A system, comprising: one or more memories designed to store computer program code; one or more processors designed to execute the computer program code; and wherein the computer program code comprises:*

The StaySafe system uses wireless communication devices for determining human activities including falling, non-movement, and normal movement by monitoring linear acceleration and angular velocity sensor data over time periods from the internal accelerometer sensor and/or gyroscope sensor. The StaySafe system uses native applications running on top of the operating systems of smartphones that use memories, processors.

> *code to receive first and second data from one or more sensors associated with a wireless communication device (WCD) transported by a mobile thing (MT), the first and second data indicative of movement of the WCD;*

The StaySafe application includes code that receives accelerometer data associated with a wireless communication device. The accelerometer data is indicative of the movement of the wireless communication device. The StaySafe application uses accelerometers within smartphones for

determining human activities falling, non-movement, and normal movement by monitoring linear acceleration and angular velocity sensor data over time periods from the internal accelerometer sensor and/or gyroscope sensor.

> *code to determine reference data that defines a reference framework from the first data;*

The StaySafe application includes code that defines how reference data for falling, non-movement, and normal movement will be compared to actual movements/acceleration. The StaySafe application includes code that determines a vertical and/or horizontal framework so the reference data may used in determining falling, non-movement, and normal movement.

> *code to normalize the second data with the reference data so that the second data can be analyzed in the reference framework; and*

Data sets from the movements (acceleration) is normalized by values, ranges, frequencies and/or time so as to be compared to reference data. The StaySafe application code removes the rotational changes to the three dimensional (3D) coordinate system by normalizing the data with the gravity based determination of the vertical axis.

> *code to identify a mobile thing motion activity (MTMA) associated with the MT based upon the normalized second data.*

The StaySafe application includes code that identifies motion activity based on the normalized data.

60.

Claim 43 of the ’558 Patent, for example, recites:

> *43. The system of claim 42, wherein the second data comprises a plurality of periodic samples.*

The StaySafe application continually compares a plurality of accelerometer and/or gyroscope data samples from the smartphone.

61.

Claim 44 of the '558 Patent, for example, recites:

> *44. The system of claim 42, wherein the reference data is indicative of a relationship to Earth gravity.*

The StaySafe application uses the earth's gravity to determine how to measure raw data against reference data.

62.

Claim 45 of the '558 Patent, for example, recites:

> *45. The system of claim 42, wherein the reference data is determined in the form of vector information indicative of a relation to Earth gravity by comparing the first data to a predefined numerical range.*

On information and belief, the StaySafe application uses the earth's gravity to determine a magnitude and direction numbers (vector) for comparing a predefined numerical range.

63.

Claim 46 of the '558 Patent, for example, recites:

> *46. The system of claim 45, wherein the one or more sensors produce first, second, and third sample data along each of 3 axes in a three dimensional (3D) coordinate system and wherein the first data pertains to a value that equals one within a predefined range, the value computed by combining the first, second, and third sample data.*

Accelerometers are sensors which measure acceleration in an *x*, *y* and *z* axis, the change in velocity over time (SI unit: m/s^2). On information and belief, the StaySafe application programs measure acceleration of the user and driver in time-segments, using first, second, et cetera, to confirm multiple time-segment matches to confirm most human activities.

64.

Claim 47 of the '558 Patent, for example, recites:

> *47. The system of claim 42, wherein the second data is in the time domain (TD) and wherein the code to identify comprises: code to compute*

> *magnitudes of the second data in each of the two dimensions of the 2D space; code to compute one or more TD statistical metrics from the magnitudes; and wherein the MTMA identifying is based at least in part upon the TD statistical metrics.*

On information and belief, the StaySafe application uses a discrete wavelet transform to convert data to time-frequency domain from time domain. The StaySafe application processes the smartphone's accelerometer *x*, *y* and *z* axis data in a two dimensional space for statistical metrics, including magnitudes of a motion activity.

65.

Claim 48 of the '558 Patent, for example, recites:

> *48. The system of claim 47, wherein the computer program code further comprises: code to transform the magnitudes from the TD to the frequency domain (FD) to produce FD data; code to compute one or more FD statistical metrics from the FD data; and wherein the MTMA identifying is based at least in part the FD statistical metrics.*

On information and belief, the StaySafe application uses a discrete wavelet transform to convert data to time-frequency domain from time domain. This provides a two dimensional representation of the power/magnitude of the signal and detailed coefficients through a statistical metrics so part of the motion activity may be determined.

66.

Claim 49 of the '558 Patent, for example, recites:

> *49. The system of claim 48, wherein the MTMA is identified from a known plurality of MTMAs and wherein the computer program code further comprises: code to compute a score for each MTMA of the known plurality; and code to compare the scores to identify the MTMA.*

The StaySafe application determines motion activities by computing an average range and score that identifies each type of motion activity. The StaySafe application determines falling, non-movement, and normal movement by assigning a number (score) that identifies motion activity types.

67.

Claim 50 of the '558 Patent, for example, recites:

> *50. The system of claim 42, wherein the system is implemented in the WCD, in a computer system that is remote to the WCD, or in a combination of both.*

On information and belief, Defendant's StaySafe application may communicate with servers and other remote computers to implement one or more of the steps in measuring and determining certain types of human activities.

68.

Claim 51 of the '558 Patent, for example, recites:

> *51. The system of claim 42, wherein the computer program code further comprises: code to determine an MTMA based action to be initiated based upon the identified MTMA; and code to initiate the MTMA based action.*

The StaySafe application code determines a motion activity, such as falling, non-movement, and normal movement; the identified motion activity may engage a different motion based activity, such as once a fall is detected, a countdown in initiated before a third party responder is notified.

69.

Independent Claim 52 of the '558 Patent, shown in italics, recites:

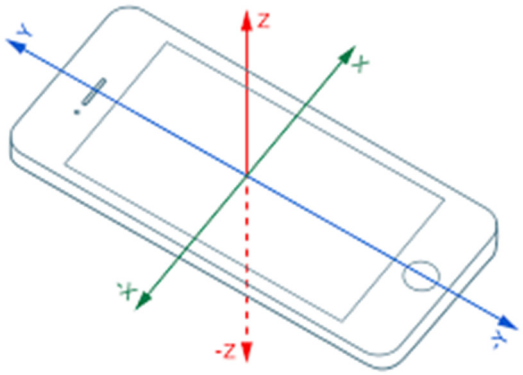
> *52. A system for implementation in a wireless communication device (WCD) that is designed to detect a plurality of mobile thing motion activities (MTMAs) associated with a mobile thing (MT), comprising: one or more memories designed to store computer program code; one or more processors designed to execute the computer program code; and wherein the computer program code comprises:*

Defendant's StaySafe application uses wireless communication devices for determining human activities falling, non-movement, and normal movement by monitoring linear acceleration and angular velocity sensor data over time periods from the internal accelerometer sensor and/or gyroscope sensor. In particular, the StaySafe application uses smartphones equipped with

memories, processors, accelerometers for monitoring linear acceleration and gyroscopes for monitoring angular velocity over time periods for determining human activities.

Claim 52 continues:

> *code to receive a plurality of data sample values from one or more sensors of the WCD that is transported by the MT, the data sample values indicative of movement of the WCD;*



The StaySafe application includes code to monitor the *x*, *y*, and *z* axis of the accelerometers for measuring linear acceleration and gyroscopes for measuring angular velocity over time periods within smartphones that are indicative of movement of the wireless communication device.

> *code to compute reference data, the reference data defining a relationship between data sample values and a reference framework to enable comparison of data sample values;*

The StaySafe application includes code that computes reference data with samples of live data to determine activities via activity identifications. In particular, the StaySafe application uses code that computes motion activity reference data that includes a numerical integral that derived from the sum of acceleration within a predefined time period.

> *code to calculate movement data based upon the reference data and the data sample values; and*

The StaySafe application includes code that computes movement data based upon the reference data and samples of live data. The StaySafe application uses code that computes a numerical

integral that's derived from the sum of acceleration within a predefined time period for a data sample value.

> *code to determine an MTMA associated with the MT based upon the movement data.*

The StaySafe application includes code that identifies motion activity based on the normalized data. The StaySafe application includes code that identifies the motion activity such as falling, non-movement, and normal movement based on the accelerometer and/or gyroscope movement data.

70.

Claim 53 of the '558 Patent, for example, recites:

> *53. The system of claim 52, wherein the computer program code further comprises: code to recognize a particular set of data sample values as a reference for defining an orientation of the WCD in a coordinate system; code to determine a rotation matrix based upon the particular set of reference data sample values; and code to calculate the movement data based upon the rotation matrix and one or more sets of the data sample values that are not the particular reference set.*

The StaySafe application includes computer program code to recognize gravity measurements within the *x*, *y*, and *z* axis that defines an orientation. Code determines and extracts gravitational acceleration so an actual acceleration (without gravity's acceleration) may be accurately measured within data samples.

71.

Claim 54 of the '558 Patent, for example, recites:

> *54. The system of claim 52, wherein the data sample values are received from a plurality of the sensors.*

The StaySafe application uses data sample values from accelerometer's and/or gyroscope's the *x*, *y* and *z* axis.

72.

Claim 55 of the ’558 Patent, for example, recites:

> *55. The system of claim 54, wherein the plurality of sensors include at least an accelerometer and a gyroscope.*

The StaySafe application uses accelerometers sensors for monitoring linear acceleration and gyroscopes sensors for monitoring angular velocity over time periods for determining human activities.

73.

Claim 56 of the ’558 Patent, for example, recites:

> *56. The system of claim 55, wherein the plurality of sensors further includes a global positioning system (GPS) receiver.*

On information and belief, the StaySafe application uses the global positioning system (GPS) receiver to determine the worker’s location during an emergency.

74.

Claim 57 of the ’558 Patent, for example, recites:

> *57. The system of claim 52, wherein the code to determine the MTMA comprises: code to compute a score for each MTMA of the plurality; and code to compare the scores to identify the MTMA.*

On information and belief, the StaySafe application determines a score from each data sample through a measurement of the time domain and frequency domain. The StaySafe application uses code that computes motion activity reference data that includes a numerical integral (or range) that is derived from the sum of acceleration within a predefined time period.

75.

Claim 58 of the ’558 Patent, for example, recites:

> *58. The system of claim 52, wherein the reference data is indicative of a relationship to Earth gravity.*

The StaySafe application subtracts earth's gravity influence from the raw accelerometer data so the reference data may accurately represent the motion activity.

76.

Claim 59 of the '558 Patent, for example, recites:

> *59. The system of claim 52, wherein the movement data is in the time domain (TD) and wherein the code to calculate comprises: code to compute a magnitude of the movement data in each of at least two dimensions of space; code to compute one or more TD statistical metrics from the magnitudes; and wherein the MTMA determining is based at least in part upon the TD statistical metrics.*

The StaySafe application processes raw accelerometer data in the time domain and the code calculates the magnitude of the movement data in at least two dimensions of space; code computes the average magnitude total and/or energy average of the magnitude total to determine at least in part the motion activity.

77.

Claim 60 of the '558 Patent, for example, recites:

> *60. The system of claim 52, wherein the computer program code further comprises: code to transform the magnitudes from the TD to the frequency domain (FD) to produce FD data; code to compute one or more FD statistical metrics from the FD data; and wherein the MTMA determining is based at least in part the FD statistical metrics.*

The StaySafe application processes raw accelerometer data in the time domain and the code calculates the magnitude of the movement data in the frequency domain to the time domain; the code produces statistical metrics from the frequency domain to determine at least in part the mobile activity.

COUNT II

DIRECT INFRINGEMENT OF THE '914 PATENT

78.

Plaintiff incorporates by reference the allegations of Paragraphs 1-15.

79.

Defendant has directly infringed and continues to directly infringe at least one or more claims of the '914 Patent, through, among other activities, making, using, and incorporating into Defendant's StaySafe system automatic programs for monitoring human activities while working. On information and belief, Defendant's StaySafe system is provided, at least in part, as a smartphone-deployed worker activity monitoring and reporting solution.

80.

Independent Claim 5 of the '914 Patent, shown in italics, recites:

> *5. A system comprising: at least one computing device; and at least one application executable in the at least one computing device, the application comprising:*

The StaySafe application uses wireless communication devices for determining human activities falling, non-movement, and normal movement by monitoring the smartphone's accelerometer *x*, *y*, and *z* axis sensor data over time periods. The StaySafe application uses native applications running on the operating systems of smartphones that are equipped with an accelerometer and gyroscope sensors for monitoring three streams of data ("the *x*, *y*, and *z* axis") from each device. The StaySafe application software monitors the accelerometer sensor for linear acceleration and the gyroscope sensor for angular velocity to determine human activities from sensor data.

logic that determines a user activity and/or user surroundings;

The StaySafe application uses accelerometer reference data by values, time-series (samples), and/or frequencies. The StaySafe application monitors the accelerometer sensor for linear

acceleration and/or the gyroscope sensor for angular velocity for using logic to determine human activities.

> *logic that determines a surveillance mode that corresponds to the user activity and/or the user surroundings;*

On information and belief, the StaySafe application uses logic for determining a surveillance mode that activates and corresponds to a user that has fallen.

> *logic that facilitates a user-defined response to the user activity and/or the user surroundings; and*

On information and belief, the StaySafe application facilitates a user-defined response when a fall is detected, allowing the user to enter a countdown mode of the surveillance monitoring.

> *logic that communicates surveillance information to at least one remotely located computer device.*

On information and belief, the StaySafe application communicates surveillance information such as geographical location over a time period to remotely located computers.

Claim 6 of the ’914 Patent, for example, recites:

> *6. The system of claim 5, wherein the logic that facilitates the user-defined response further comprises logic that automatically activates the user-defined response to the user activity and/or the user surroundings.*

On information and belief, the StaySafe application facilitates a user-defined response when a fall is detected, allowing the user to enter a countdown mode of the surveillance monitoring.

81.

Independent Claim 15 of the ’914 Patent, shown in italics, recites:

> *15. A method comprising the steps of: determining, by a computing device, a user activity and/or user surroundings;*

On information and belief, the StaySafe application uses applications on smartphones (wireless communication devices) for automatically detecting falling, non-movement, and normal

movement states. The StaySafe application uses the phone's sensors to measure a user's geographical location..

> *determining, by the computing device, a surveillance mode that corresponds to the user activity and/or the user surroundings;*

The StaySafe application automatically determines surveillance modes for falling, non-movement, and normal movement states.

> *facilitating, by the computing device, a user-defined response to the user activity and/or the user surroundings; and*

On information and belief, the StaySafe application will enter a countdown mode after a fall is detected, and after a predetermined time, if the user does not initiate normal movement, a third party will be notified.

> *communicating, by the computing device, surveillance information to at least one remotely located computer device.*

On information and belief, the StaySafe application communicates surveillance information (such as geographical information) over a time period to remotely located computers.

82.

Claim 20 of the '914 Patent, for example, recites:

> *20. The method of claim 15, wherein the step of determining the user activity and/or the user surroundings further comprises the step of matching, by the computing device, sensor data to at least one algorithm with at least one user-defined parameter.*

On information and belief, the StaySafe application, after detection of a fall and subsequent non-movement over time, engages countdown algorithms and determines phone geographical location.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for relief that the Court enter judgment in their favor and against the Defendant, granting the following relief:

That the Court enter judgment that one or more claims of the ’558 Patent have been infringed either literally and/or under the doctrine of equivalents, by Defendant;

That the Court enter judgment that one or more claims of the ’914 Patent have been infringed either literally and/or under the doctrine of equivalents, by Defendant;

That Defendant be ordered to pay damages adequate to compensate Plaintiff for its acts of infringement, pursuant to 35 U.S.C. § 284;

That Plaintiff be awarded increased damages under 35 U.S.C. § 284 due to Defendant’s willful infringement of the ’558 and ’914 Patents;

That the Court find that this case is exceptional and award Plaintiff reasonable attorneys’ fees pursuant to 35 U.S.C. § 285;

That Defendant, its officers, agents, employees, and those acting in privity with it, be preliminarily enjoined from further infringement, contributory infringement, and/or inducing infringement of the patents-in-suit, pursuant to 35 U.S.C. § 283;

That Defendant, its officers, agents, employees, and those acting in privity with it, be permanently enjoined from further infringement, contributory infringement, and/or inducing infringement of the patents-in-suit, pursuant to 35 U.S.C. § 283;

That Defendant be ordered to pay prejudgment and post-judgment interest;

That Defendant be ordered to pay all costs associated with this action; and

That Plaintiff be granted such other and additional relief as the Court deems just, equitable, and proper.

DEMAND FOR JURY TRIAL

Pursuant to Fed. R. Civ. P. 38(b), Plaintiff demands a jury trial on all issues justiciable by a jury.

Respectfully Submitted,

Dated: June 4, 2024

/s/ Brett Thomas Cooke

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